# 2005 NAIP Survey
# Executive Summary
# For
# Minnesota

USDA
Farm Service Agency

Aerial Photography Field Office

March 2006

# Contents

# Section 1

## 1.0 Introduction

The primary purpose of NAIP is to acquire peak growing season "leaf on" imagery, and deliver this imagery to United States Department of Agriculture (USDA) County Service Centers in order to maintain Common Land Unit (CLU) boundaries and assist with crop compliance and a multitude of other farm programs.

As evidenced by the types of customers requesting NAIP imagery, the imagery has other purposes as well. Although our primary customers are States and County Service Centers, other uses for NAIP imagery, including military, real estate, recreation, planning, etc., cannot be overlooked.

NAIP is a program with a relatively short history, beginning with pilot projects in 2001 and 2002, and moving to full volume acquisition in 2003 to 2005, based on funding and partnering. NAIP is moving out of the research and development phase and into sustainment status. By moving into a sustainment phase, a program can build and evaluate a quality business process, and stabilize. Part of this process is evaluating how NAIP is working for its primary customers.

## 1.1 Purpose and Scope

The focus of this document is to assess in a qualitative manner how NAIP is satisfying customer needs in Minnesota. In other words, "How did APFO do in providing *useful* NAIP imagery for its primary customer?" Answering this question comprises the purpose and scope.

## 1.2 Survey Submittals

For the initial disposition, the following States were sent surveys to disseminate to County Service Centers for completion: WA, OR, OK, KS, NE, MO, IA, **MN**, WI, IL, IN, OH, CT, and NC. No responses were received from KS or AZ by the 15 Dec 2005 due date. WA noted that they would respond to the survey, but due to imagery delivery/redelivery dates, responses would likely be after 15 Dec.

A second waive of surveys was sent to the following States to disseminate to County Service Centers for completion: CA, CO, MT, ND, SD, TX, LA, MS, AL, GA, FL, SC, VA, MD, PA, MI, RI, and CT. Responses were requested by 17 Feb, and by 9 Mar for select states which received imagery "late". Surveys were accidentally sent to CT twice, however, County Service Centers only responded once. LA noted that they would only be able to get a few Counties to complete the survey by the 9 Mar due date. MI noted they would not be able to participate in the survey because of CIR rework that would be completed after the survey due date. MT noted that due to the late distribution of imagery, surveys would likely be returned after the 9 Mar due date. During the second waive of surveys, no survey responses were received by CO, GA, MI, or AL. Surveys received after 9 Mar 06 were not scored.

# Section 2

## 2.0 Qualitative Evaluation Summary

NAIP Assessment Surveys were provided by email to County Service Centers via the State Office and responses were requested by 15 Dec 05. Out of the responses received, in Minnesota, 3059 of a possible 4115 points were achieved, for a weighted average score out of 1.0 of .743, for a rating of 74.3%. Translated into survey terms, this is an overall rating of "Satisfied". The map on the following page graphically represents overall survey results by county. These results indicate that generally the counties that participated in the survey were satisfied with 2005 NAIP and that the products met customer needs most of the time. However, there is room for improvement.

Most textual comments from the survey revolved around color quality and timing of imagery acquisition and delivery. Textual comments can be found in the Executive Summary Supplementals 1 and 2. A statistical summary by question of survey results is shown below: Note that Q1-8 are out of a possible 5 points and Q9-10 are out of a possible 10 points. Statistically, the lowest average scoring question was Q1, "Was the imagery received by your office in time to be useful for crop compliance work?" Statistically, the highest scoring question was Q8, "Is the imagery useful for historical purposes, including prior year crop disaster measurements, or any other purpose where comparing older imagery to newer, or historical change detection is of importance?"

| *Q1* | | *Q2* | | *Q3* | | *Q4* | | *Q5* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean | 3.2 | Mean | 3.887323944 | Mean | 3.9375 | Mean | 4 | Mean | 4.114754098 |
| Standard Error | 0.145812418 | Standard Error | 0.130852791 | Standard Error | 0.140638778 | Standard Error | 0.144337567 | Standard Error | 0.123912451 |
| Median | 3 | Median | 4 | Median | 4 | Median | 4 | Median | 4 |
| Mode | 3 | Mode | 5 | Mode | 4 | Mode | 5 | Mode | 4 |
| Standard Deviation | 1.262772582 | Standard Deviation | 1.102585219 | Standard Deviation | 1.125110224 | Standard Deviation | 1.154700538 | Standard Deviation | 0.967787178 |
| Sample Variance | 1.594594595 | Sample Variance | 1.215694165 | Sample Variance | 1.265873016 | Sample Variance | 1.333333333 | Sample Variance | 0.936612022 |
| Kurtosis | -0.796650834 | Kurtosis | -1.021863419 | Kurtosis | 1.442765423 | Kurtosis | 0.50506157 | Kurtosis | 2.173150981 |
| Skewness | -0.09928731 | Skewness | -0.560755504 | Skewness | -1.323361089 | Skewness | -1.149379338 | Skewness | -1.377073054 |
| Range | 4 | Range | 3 | Range | 4 | Range | 4 | Range | 4 |
| Minimum | 1 | Minimum | 2 | Minimum | 1 | Minimum | 1 | Minimum | 1 |
| Maximum | 5 | Maximum | 5 | Maximum | 5 | Maximum | 5 | Maximum | 5 |
| Sum | 240 | Sum | 276 | Sum | 252 | Sum | 256 | Sum | 251 |
| Count | 75 | Count | 71 | Count | 64 | Count | 64 | Count | 61 |

| *Q6* | | *Q7* | | *Q8* | | *Q9_X2* | | *Q10_X2* | |
|---|---|---|---|---|---|---|---|---|---|
| Mean | 3.746031746 | Mean | 3.789473684 | Mean | 4.277777778 | Mean | 7.479452055 | Mean | 6.459459459 |
| Standard Error | 0.151740633 | Standard Error | 0.157790275 | Standard Error | 0.106924246 | Standard Error | 0.270372079 | Standard Error | 0.301906315 |
| Median | 4 | Median | 4 | Median | 5 | Median | 8 | Median | 6 |
| Mode | 4 | Mode | 5 | Mode | 5 | Mode | 8 | Mode | 4 |
| Standard Deviation | 1.204403935 | Standard Deviation | 1.191290448 | Standard Deviation | 0.90728231 | Standard Deviation | 2.310060058 | Standard Deviation | 2.59709632 |
| Sample Variance | 1.450588838 | Sample Variance | 1.419172932 | Sample Variance | 0.823161189 | Sample Variance | 5.336377473 | Sample Variance | 6.744909293 |
| Kurtosis | 0.016198301 | Kurtosis | 0.003980162 | Kurtosis | 1.531276002 | Kurtosis | -0.163949665 | Kurtosis | -1.177331814 |
| Skewness | -0.862356504 | Skewness | -0.82398163 | Skewness | -1.285033437 | Skewness | -0.74797315 | Skewness | 0.021008625 |
| Range | 4 | Range | 4 | Range | 4 | Range | 8 | Range | 8 |
| Minimum | 1 | Minimum | 1 | Minimum | 1 | Minimum | 2 | Minimum | 2 |
| Maximum | 5 | Maximum | 5 | Maximum | 5 | Maximum | 10 | Maximum | 10 |
| Sum | 236 | Sum | 216 | Sum | 308 | Sum | 546 | Sum | 478 |
| Count | 63 | Count | 57 | Count | 72 | Count | 73 | Count | 74 |

# 2005 NAIP - Overall Qualitative Survey Results